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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------------------------------------------------------------------|-------------|----------------------|-------------------------|------------------|
| 09/863,594 | 05/23/2001 | Jorg Rheims | VOI0189.US | 9308 |
| 7590 | 05/03/2005 | | EXAMINER | |
| Todd T. Taylor TAYLOR & AUST. P.C. 142 S. Main St. P.O. Box 560 Avilla, IN 46710 | | | ALVO, MARC S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1731 | |
| | | | DATE MAILED: 05/03/2005 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/863,594 | RHEIMS ET AL | |
| | Examiner | Art Unit | |
| | Steve Alvo | 1731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 January 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 and 13-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11 and 13-19 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Claims 1-11 and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "said additive being CaCO₃" is indefinite as the additive can be Ca(OH)₂, see claims 15-17. CaCO₃ is loaded into the fibers, but it does not have to be the additive. It is not clear if the additive is CaCO₃ or forms CaCO₃. If it is added as an additive, claim 1 is inconsistent with dependent claim 15.

The argument that claim 15 includes two additives is not convincing. The claim states "one said additive is Ca (OH)₂". The term "said additive" refers to the same additive as previously described in claim 1. Claim 1 states ""at least one said additive being CaCO₃". The "said additive" can not be both Ca(OH)₂ and CaCO₃.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GREEN et al in view of HANSEN (4,055,903) or CARLSMITH (5,810,973) and further in view of COUSIN et al.

GREEN et al teach adding calcium carbonate solid particles (column 4, lines 59-61) to load paper pulp with the calcium carbonate filler and teaches that the pulp should be subjected to mechanical treatment in a refiner (column 4, lines 3-5) or disintegrator (column 6, lines 33-39).

Such mechanical agitation would inherently fluff the pulp. HANSEN or CARLSMITH show that disintegrators (column 4, lines 54-55) or refiners (column 1, lines 58-59) fluff the pulp. If the fluffing of pulp is not inherently taught by GREEN et al, then it would have been obvious that the refiner and/or disintegrator of GREEN et al would be fluffing the pulp as taught by HANSEN (4,055,903) or CARLSMITH (5,810,973). COUSIN et al teaches that the calcium carbonate can be loaded into the pulp fibers by adding $\text{Ca}(\text{OH})_2$ into the fibers at a stock pH of 12.0 (column 5, lines 27-32) and letting calcium carbonate precipitate on the fibers in situ. It would have been obvious to one of ordinary skill; in the art to form the calcium carbonate of GREEN et al in situ in the manner taught by COUSIN et al. This does not appear to differ from the process taught by Applicant, see claims 15-17 of the instant process and page 1, last 2 lines and page 3, lines 8-11 of the instant specification. Although GREEN et al teaches the fibers may also receive mechanical treatment, such as refining or beating prior to lumen-loading (column 4, lines 3-5); GREEN et al teaches that this mechanical treatment can occur prior to lumen-loading or “during the impregnation stage”, see column 6, lines 37-39. Obviously, the mechanical treatment would include the refining of the fibers prior to or “during impregnation”. It is also noted that when the fibers are mechanically fluffed in the refiner or pulper prior to lumen-loading, that the intensity of the mechanical aspects of the impregnation steps are increased to overcome the filtering out of lumen particles (column 4, lines 6-10). This increased mechanical treatment would fluff the fibers. It is also noted that the disintegrator is described by GREEN et al as providing mild agitation (column 6, lines 32-34). Since a disintegrator is known to fluff the pulp, see HANSEN, any increased agitation would also fluff the pulp.

Applicant's arguments that the instant pulp is being treated in a "fluffer" rather than in a "refiner" or "disintegrator" is not convincing as "fluffer" is a broad term can read on any device that can be used to fluff pulp. As set forth above, HANSEN or CARLSMITH show that disintegrators (column 4, lines 54-55) or refiners (column 1, lines 58-59) can be used to fluff the pulp. Thus disintegrators or refiners can be considered fluffers when operated under the proper conditions. It is noted that Klaus Doelle's Patent No. 6,355,138, which is of record, teaches that the fluffers 18 and 20 are constructed of refiner co-acting refiner plates 32 which fluff the pulp as it passes between the contoured surfaces (38) of the two refiner disks. Clearly the refiner of GREEN can be used as a fluffer to fluff the pulp.

The Declaration of Klaus Doelle, filed January 24, 2005, has been considered, but is not convincing as the claimed fluffer does not define over the disintegrator or refiners of the applied art. Klaus Doelle states that the refiners and disintegrators of the Prior Art put significant energy into the pulp while a fluffer puts only a minor amount of energy into the fibers. However, the disclosed "fluffer" does not appear to structurally differ from a refiner or disintegrator. The instant specification, page 4, lines 19-22, describes the fluffer used by Applicant as having disks (12), equipped with one or more tooth patterns and/or knives and having a gap between the disks (12) in which the fiber stock suspension is divided in order to enlarge the specific surface. The structure of the disclosed fluffer appears to be the same as the tooth containing refiner or the knife containing disintegrator of GREEN et al and/or HANSEN or CARLSMITH. The refiners or disintegrators of the applied art can function as fluffers as long as they are operated at lower speeds. It is also noted that the disintegrator is described by GREEN et al as providing mild agitation (column 6, lines 32-34). As set forth above, Klaus Doelle's own Patent

(6,355,138) teaches that the fluffers 18 and 20 are constructed of refiner co-acting refiner plates 32 which fluff the pulp as it passes between the contoured surfaces (38) of the two refiner disks. Thus the refiners of GREEN et al clearly can be considered fluffers.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steve Alvo
Primary Examiner
Art Unit 1731

msa